

No.

200500002



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

ProGene Plant Research LLC

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE FEE THEREON IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEA, FIELD

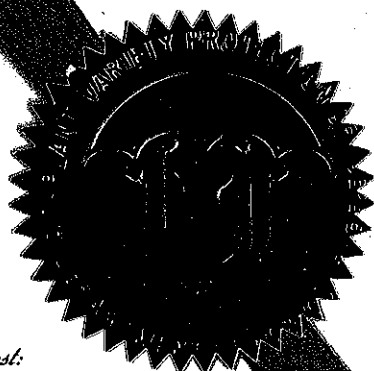
'Monarch'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this ninth day of April, in the year two thousand and seven.

Attest:

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

Secretary of Agriculture




U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER ProGene Plant Research LLC		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME Pro 98106		3. VARIETY NAME Monarch	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  860 S. Crestline Othello, WA 99344		5. TELEPHONE (include area code) (509) 488-3977		FOR OFFICIAL USE ONLY  PVPO NUMBER <b>2005 00002</b>	
		6. FAX (include area code) (509) 488-5289			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Partnership (Limited Liability Co.)		8. IF INCORPORATED, GIVE STATE OF INCORPORATION		9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)  Kurt Braunwart 860 S. Crestline Othello, WA 99344				FILING DATE October 5, 2004	
11. TELEPHONE (include area code) (509) 488-3977		12. FAX (include area code) (509) 488-5289		FILING AND EXAMINATION FEES: \$ 3652.00 DATE 10/5/2004 CERTIFICATION FEE: \$ 768.00 DATE 3/12/2007	
13. E-MAIL progene@cbbn.net		14. CROP KIND (Common Name) Field Pea			
15. GENUS AND SPECIES NAME OF CROP Pisum sativum L.		16. FAMILY NAME (Botanical) Leguminosae		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety ✓ b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety ✓ d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) ✓ e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership ✓ f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		<input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no", go to item 22) 20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED NUMBER 1,2,3, etc. (If additional explanation is necessary, please use the space indicated on the reverse.)			
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)			
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF OWNER 		SIGNATURE OF OWNER			
NAME (Please print or type) Kurt Braunwart		NAME (Please print or type)			
CAPACITY OR TITLE Managing Owner-ProGene		DATE 9-28-04		CAPACITY OR TITLE DATE	

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 plus \$320 filing fee and \$2,385 examination fee, payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

## ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;  
(2) the details of subsequent stages of selection and multiplication;  
(3) evidence of uniformity and stability; and  
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:  
(1) Identify these varieties and state all differences objectively;  
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and  
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)  
USA--October 2003 was first sale of Monarch for commercial evaluation.

(10-12-03) XAB 9/29/04

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705.  
Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed/lsg-sd.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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SET-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (02-99) which is obsolete.



860 S Crestline  
Othello, WA 99344  
E-mail: [progene@cbnn.net](mailto:progene@cbnn.net)

Cellular: (509) 989-0405  
Fax: (509) 488-5289  
Phone: (509) 488-3977

Date: September 23, 2004

To: Mark Hermeling  
USDA/PVPO  
Washington, D.C.

From: Kurt Braunwart  
ProGene L.L.C.

Subject: PVP Application for field pea variety Monarch  
EXHIBIT A. Origin and Breeding History of the Variety

The original hybrid cross that Monarch (Hybrid cross number MPX9013) came from was made in the winter of 1989-1990. The cross was between the following varieties:

P718 X GP 822406-10-2-1

P718 was a line from Nickerson a French breeding company parentage unknown. GP 822406-10-2-1 was a breeding line in Rogers Brothers Seed Company's dry pea program who's parents were NOVELLA MR X COBRI. Both varieties are from other breeding programs and parentage is unknown.

The cross was made before ProGene Plant Research purchased the breeding program from Rogers Brothers Seed Co.

Following is a chronological progression of the cross up to the current position of Monarch as a variety.

- 1990	F1 90-DP0014	Bulk
- 1991	F2 91-DW-034	Bulk
- 1991	F3 91-DP1913	Bulk
- 1992	F4 92-DP4013	35 SPS's
- 1996	F5 96-SP5482	2 SPS's
- 1997	F6 97-SI 6643	Bulk 652g
- 1998	F7 98 SB 7506	Bulk Prelim Yield 4655g
- 1999	F8 99 SI 8136	Bulk Seed Increase
- 2000	F9 00 SB 9001	Bulk Seed Increase 387 lbs.
- 2001		Small field seed increase
- 2002		Seed Increase
- 2003		Seed Increase

Criteria used to select Monarch as a variety to release in the Pacific Northwest of USA:

- **Darker Green Seed Coat Color** – seed is a darker blue green in color than Cruiser, the current standard in the Pacific Northwest Industry.
- **Bleach resistance** – It is verified that Monarch has comparable bleach resistance to Cruiser.
- **Earlier maturity**- Monarch is 3 to 7 days earlier in maturity than Cruiser.
- **Standability** – Monarch exhibits adequate to good standability clear to physiological maturity. Monarch is an **Af (semileafless)** variety which assists in standability.
- **Yield** - Equal to or better than Cruiser

Statement of Stability and Uniformity:

Monarch has been observed by ProGene research personnel over five generations and has been found to be stable and uniform. It is also uniform in all traits listed in schedule "C".

Statement of "No Variants"

Monarch has been observed over the past five generations of seed increase with no variants being observed.

*Kurt Braunwart*

9-28-04



Plant Research

860 S Crestline,  
Othello, WA 99344  
E-mail: [progene@cbnn.net](mailto:progene@cbnn.net)

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Fax: (509) 488-5289  
Phone: (509) 488-3977

To: Mark Hermeling  
USDA/PVPO

From: Kurt Braunwart  
ProGene Plant Research L.L.C.

Subject: Application for PVP of field pea variety Monarch  
EXHIBIT B: Statement of Distinctness

In the Pacific Northwest of the United States the most similar variety to Monarch is Cruiser. Both Monarch and Cruiser are green seeded semi-leafless (af) spring field pea varieties. However, there are some distinct differences.

**Days to first bloom** - In 2001, 2002, & 2003 Washington State University compared Monarch and Cruiser. Over the three years Monarch averaged 50 days to first flower while Cruiser averaged 55 days. In 2001 the difference was 7 days, 2002 was 4 days and 2003 was 4 days. Monarch clearly blooms earlier than Cruiser. \*\*

**Nodes to first bloom** - Over the same three years WSU compared the nodes to first bloom. Monarch average 13 nodes to first bloom while Cruiser averaged 17 nodes. \*\*

**Height at end of bloom** - With 8 direct comparisons over 4 years from Washington State University & ProGene Monarch was clearly shorter in plant growth at the end of bloom than Cruiser. Monarch averaged 54.8 cm while Cruiser averaged 75.8 cm. Cruiser was taller in every comparison. \*\*

**Seed Size** - In 10 comparisons over 3 years from University of Idaho, WSU and ProGene Monarch seed size average was larger than Cruiser. When expressed in grams per 100 seeds Monarch was larger than Cruiser in 7 direct comparisons, Cruiser was larger in 2 comparisons and they were equal in 1 comparison. Monarch average 19.3 grams/100 seeds while Cruiser averaged 19.0 grams/100 seeds. \*\*

**Seed shape** - Monarch seed is generally smooth and round but often has a dimple. Cruiser seed is smooth and round and does not display any dimpling.

\*\* See attached comparative data sheets.

*Kurt Braunwart* 9-28-04

**Attachment for PVP application for Monarch Green Field Pea**  
**Comparative Data for EXHIBIT B: Statement of Distinctness**

**Days to First Bloom - WSU DATA (3 comparison years - 3 sites)**

YEAR	MONARCH	CRUISER
2001	47	54
2002	54	58
2003	48	52
<b>Average</b>	<b>49.67</b>	<b>54.67</b>

**Nodes to First Bloom - WSU DATA (3 comparison years - 3 sites)**

YEAR	MONARCH	CRUISER
2001	13	17
2002	12	17
2003	14	17
<b>Average</b>	<b>13</b>	<b>17</b>

**Height at End of Bloom - WSU (3 years - 3 sites) ProGene (4 years - 5 sites)**

YEAR	MONARCH	CRUISER
2001 WSU	61	81
2002 WSU	55	68
2003 WSU	39	50
2001 ProGene	53.3	72
2002 ProGene	63.5	106.7
2003 ProGene (R)	59.3	74.5
ProGene (C)	41.5	78.1
2004 ProGene (C)	66	78.1
<b>Average</b>	<b>54.8</b>	<b>75.8</b>

**Seed Size - U of I (3 years & sites) WSU (3 years & sites) ProGene (3 years & 4 sites)**

YEAR	MONARCH	CRUISER
2001 U of I	18.5	18.0
2002 U of I	19.1	18.4
2003 U of I	20.5	17.4
2001 WSU	20.9	22.4
2002 WSU	18.8	18.8
2003 WSU	19.4	19.2
2001 ProGene	20.6	23.0
2002 ProGene	19.5	19.3
2003 ProGene (R)	17.3	16.1
2003 ProGene (C)	18.6	17.3
<b>Average</b>	<b>19.3</b>	<b>19.0</b>

*Kurt Braunwart 9-28-04*

Instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

EXHIBIT C  
(Pea)

OBJECTIVE DESCRIPTION OF VARIETY  
PEA (*Pisum sativum* L.)

NAME OF APPLICANT(S)  ProGene Plant Research LLC  ADDRESS (Street and No. or RD No., City, State, and Zip Code)  860 S. Crestline Othello, WA 99344	FOR OFFICIAL USE ONLY
	PVPO NUMBER 2005 00 002
	VARIETY NAME Monarch
	TEMPORARY OR EXPERIMENTAL DESIGNATION Pro 98106

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g.  or ) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:

Please answer all questions for your variety; lack of response may delay progress of your application.

I. TYPE:

1=Garden 2=Field 3=Edible-podded 4=Other (SPECIFY): \_\_\_\_\_

II. MATURITY:

Node number of first bloom:  No. of days processing  Heat Units

No. of days Earlier than ✓  1 = Alaska WR 2 = Thomas Laxton WR 3 = Little Marvel

No. of days Later than  4 = Wando 5 = Alderman WR 6 = Austrian Winter 7 = Other

III. PLANT HEIGHT:

Cm. High (55.4 cm)

Cm. Shorter than ✓  Name of check cultivar Cruiser

Cm. Taller than  Name of check cultivar \_\_\_\_\_

IV. VINE:

Habit: 1=Determinate 2=Indeterminate  Stockiness: 1 = Slim (Alaska) 2 = Medium (Thomas Laxton WR) 3 = Heavy (Alderman)

Branching: 1 = None (Alaska) 2 = 1-2 Branches (Little Marvel) 3 = More than 2 Branches (Dwarf Gray Sugar) (Usually 0-1)

Internodes: 1 = Straight 2 = Zig Zag (slightly)  Number of nodes



5. LEAFLETS: Exhibit C - page 2 - monarch #200500002



Color: 1 = Light Green (Alaska WR) 2 = Medium Green (Thomas Laxton WR) 3 = Dark Green (Alderman)  
4 = Other (Specify) \_\_\_\_\_ 5 = Blue Green 6 = Yellow Green 0 = Not Applicable



Wax: 1 = None 2 = Light 3 = Medium  
4 = Heavy 0 = Not Applicable



1 = Not Marbled 2 = Marbled (Alaska)  
0 = Not Applicable



Number of Leaflet Pairs: 1 = Not Paired 2 = One 3 = Two 4 = Three or More 0 = Not Applicable



Leaflet Type: 1 = Leafless 2 = Semi 3 = Normal

6. STIPULES:



1 = Lacking 2 = Present



1 = Not Clasping 2 = Clasping



1 = Not Marbled 2 = Marbled



Size (Compared with leaflets):

1 = Smaller 2 = Same  
3 = Larger 0 = Not Applicable



Color (Compared with Leaflets): 1 = Lighter 2 = Same 3 = Darker 0 = Not Applicable



Color: 1=Light-Green 2=Medium-Green 3=Dark-Green 4=Blue-Green 5=Yellow-Green 6=Other \_\_\_\_\_

Color Chart Value: 137B

Select the Color Chart Used to Determine Values.



Royal Horticulture Society Colour Chart



Munsell Color Chart



Other \_\_\_\_\_



Stipule Size: 1=Small 2=Medium 3=Large

Please provide comparative varieties (check varieties) and stipule color.

	Variety (1)	Variety (2)	Variety (3)
Variety Name:	<u>Cruiser</u>	<u>Ariel</u>	<u>Karita</u>
Stipule Size:	<u>medium</u>	<u>medium</u>	<u>medium</u>
Color Chart Value:	<u>137B</u>	<u>137C</u>	<u>137C</u>

7. FLOWER COLOR:



Venation



Standard



Wing



Keel

1 = White  
2 = Greenish  
3 = Lavender  
4 = Purple  
5 = Red  
6 = Other (specify) \_\_\_\_\_

## 3. PODS:

Pro 98106 (Monarch)

2005 00 002

- ☐ 2 Shape: 1 = Straight 2 = Slightly Curved 3 = Curved
- ☐ 2 End: 1 = Pointed (Alderman) 2 = Blunt (Alaska)
- ☐ 2 Color: 1 = Light Green (Alaska WR) 2 = Medium Green 3 = Dark Green (Alderman)  
4 = Other (Specify) 5 = Blue 6 = Purple 7 = Yellow
- ☐ 2 Surface: 1 = Smooth 2 = Rough ☐ 2 Surface: 1 = Shiny 2 = Dull
- ☐ 3 Borne: 1 = Single 2 = Double 3 = Single and Double 4 = Single, Double, & Triple 5 = Double & Triple  
6 = Triple 7 = Other (Specify) 8 = Quad, Single, Double, Triple 9 = Quad

☐ 6 ☐ .2 CM. Length (6.2 cm) ☐ 10 ☐ .5 MM. Width (Between Sutures) (10.5) ☐ 7 ☐ .0 No. Seeds Per Pod ✓ (7.0 seeds)

## SEEDS (95-100 Tenderometer):

- ☐ Color: 1 = Light Green 2 = Green 3 = Dark Green 4 = Other (Specify) 5 = Yellow  
6 = Brown 7 = Yellow green

Give: % ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ Average

## SEEDS (Dry, Mature):

- ☐ 4 Shape: 1 = Flattened 2 = Angular 3 = Oval 4 = Rounded 5 = Splashed 6 = Flecked 7 = Bicolored

- ☐ 2 Surface: 1 = Smooth 2 = Dimpled ☐ 2 Surface: 1 = Shiny 2 = Dull  
3 = Wrinkled

- ☐ 1 Color Pattern: 1 = Monocolor 2 = Mottled 3 = Striped 4 = Dotted

- ☐ 17 Primary Color (147C R.H.S. Colour Chart) ☐ 3 Secondary Color (Color varies from primary to secondary) 138C  
1 = Creamy - White 2 = Cream & Green 3 = Light Green  
4 = Medium Green 5 = Dark Green 6 = Blue-Green  
7 = Yellow 8 = Brown 9 = Red 10 = Gray 11 = Black  
12 = Salmon 13 = Purple 14 = Tan 15 = White  
16 = Pink 17 = Yellow-Green

- ☐ 2 Hilum Floor Color: 1 = White 2 = Tan ☐ 1 Cotyledon Color: 1 = Green 2 = Yellow  
3 = Black 3 = Orange 4 = Cream

☐ 19 ☐ .7 Grams per 100 Seeds ✓  
(19.7)

10. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant)

Pro 98106 (Monarch)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

2005 00 002

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> 2 Fusarium Wilt - Race 1              | <input type="checkbox"/> Fusarium Wilt (Near Wilt) - Race 2  |
| <input type="checkbox"/> Stripe Rust ( <i>Puccinia striiformis</i> )      | <input type="checkbox"/> Loose Smut ( <i>Ustilago tritici</i> )  |
| <input type="checkbox"/> Tan Spot ( <i>Pyrenophora tritici-repentis</i> ) | <input type="checkbox"/> Flag Smut ( <i>Urocystis agropyri</i> )   |
| <input type="checkbox"/> Halo Spot ( <i>Selenophoma donacis</i> )         | <input type="checkbox"/> Common Bunt ( <i>Tilletia tritici</i> or <i>T. laevis</i> )                               |
| <input type="checkbox"/> <i>Septoria nodorum</i> (Glume Blotch)           | <input type="checkbox"/> Dwarf Bunt ( <i>Tilletia controversa</i> )  |
| <input type="checkbox"/> <i>Septoria avenae</i> (Speckled Leaf Disease)   | <input type="checkbox"/> Karnal Bunt ( <i>Tilletia indica</i> )  |
| <input type="checkbox"/> <i>Septoria tritici</i> (Speckled Leaf Blotch)   | <input checked="" type="checkbox"/> 1 Powdery Mildew ( <i>Erysiphe graminis</i> f. sp. <i>tritici</i> ) (Tolerant) |
| <input type="checkbox"/> Scab ( <i>Fusarium</i> spp.)                     | <input type="checkbox"/> "Snow Molds"  |
| <input type="checkbox"/> "Black Point" (Kernel Smudge)                    | <input type="checkbox"/> Common Root Rot ( <i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)        |
| <input type="checkbox"/> Barley Yellow Dwarf Virus (BYDV)                 | <input type="checkbox"/> Rhizoctonia Root Rot ( <i>Rhizoctonia solani</i> )  |
| <input type="checkbox"/> Soilborne Mosaic Virus (SBMV)                    | <input type="checkbox"/> Black Chaff ( <i>Xanthomonas campestris</i> pv. <i>translucens</i> )                      |
| <input type="checkbox"/> Wheat Yellow (Spindle Streak) Mosaic Virus       | <input type="checkbox"/> Bacterial Leaf Blight ( <i>Pseudomonas syringae</i> pv. <i>syringae</i> )                 |
| <input type="checkbox"/> Wheat Streak Mosaic Virus (WSMV)                 | <input type="checkbox"/> Other (SPECIFY)   |
| <input checked="" type="checkbox"/> 1 Other (SPECIFY) (Enation Virus)     | <input type="checkbox"/> Other (SPECIFY)   |
| <input type="checkbox"/> Other (SPECIFY)                                  | <input type="checkbox"/> Other (SPECIFY)   |
| <input type="checkbox"/> Other (SPECIFY)                                  | <input type="checkbox"/> Other (SPECIFY)   |

11. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> 0 Aphids | <input type="checkbox"/> Other (SPECIFY) |
|--|--|

12. Additional information on any item above, or general comments that may aid in identification:

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) ProGene Plant Research LLC	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER Pro 98106	3. VARIETY NAME Monarch
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 860 S. Crestline Othello, WA 99344	5. TELEPHONE (include area code) (509) 488-3977	6. FAX (include area code) (509) 488-5289
7. PVPO NUMBER		2005 00002

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain

☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. National or a U.S. based company? If no, give name of country

☒ YES ☐ NO
10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☒ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☒ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (If needed, use the reverse for extra space):

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 6 minutes per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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